

Preliminary Amendment  
U.S. Appln. No. 09/897,495

**REMARKS**

Entry and consideration of this Amendment is respectfully requested.

Respectfully submitted,



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**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

**The specification is changed as follows:**

**Page 4, first full paragraph:**

Each ingress router  $I_1$  of the second domain  $B$  uses the SLA information to compute the estimated volume of class-specific traffic between the ingress router  $I_1$  and all egress routers  $[E_2, E_3] \underline{E_1}, \underline{E_2}$  in the same domain, to create an  $N \times N$  matrix  $M$ , where  $N$  represents the number of edge routers in the domain. The  $(i,j)$ -th element of the traffic matrix for a given class represents the total bandwidth used by that given class from ingress router  $i$  to egress router  $j$ . For example, as illustrated in Figure 1, for the second domain  $B$ , element  $(1,1)$  of the matrix  $M$  equals  $\lambda_1$ , and element  $(1,2)$  of the matrix equals  $\lambda_2$ . Once constructed, the traffic matrices are used to compute the provisioning routes (e.g., paths), for each non-zero element of those matrices, and the computed paths are pinned down using multi-protocol label switching (MPLS) for Diffserv networks or multi-protocol lambda switching (MP $\lambda$ S) for optical networks.

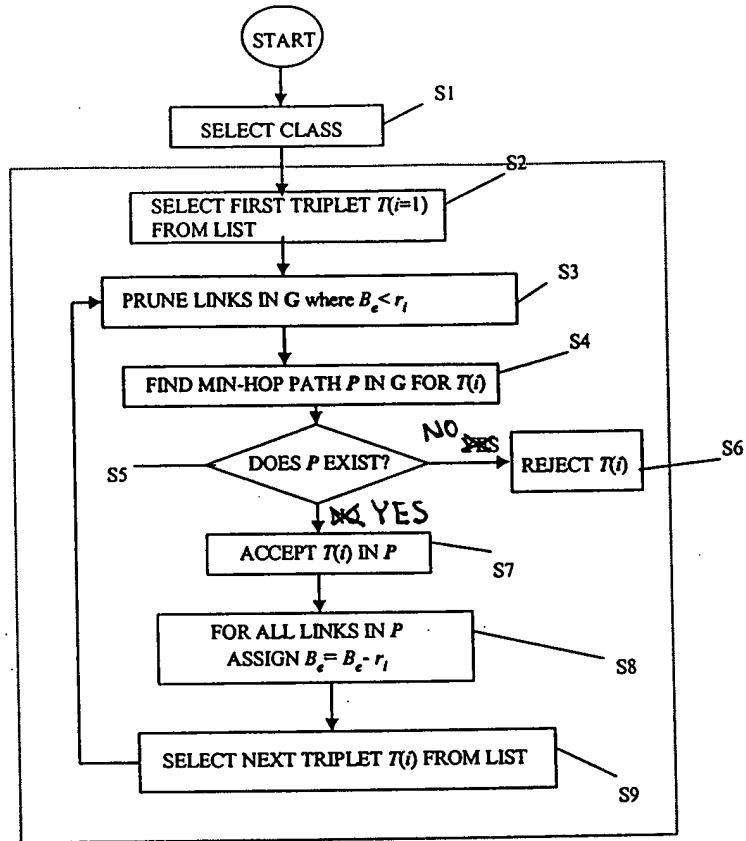
**Page 6, after equation (4), please insert the following paragraph:**

--V represents the total amount of bandwidth of accepted flows, and W represents the total amount of bandwidth of all flows.--

**Page 16, second full paragraph:**

Accordingly, in the next step S21,  $M$  is defined as the subset of those already accepted (i.e., during the previous  $i-1$  steps) quadruplets  $T(1), \dots, T(i-1)$  for which the following two

conditions hold true. First, the bit  $[r_j]b_i$  of quadruplet is TRUE and the path  $SPA(j)$  thus can be altered. Second, all links  $e$  in  $Q$  belong to the path  $SPA(j)$ :  $Q \subset SPA(j)$ . Therefore, if the bandwidth reservation for  $r_j$  of the quadruplet  $T(j)$  for its path  $SPA(j)$  is removed, the available bandwidth at each link  $e$  in  $Q$  increases by  $r_j$ . Since the  $i^{th}$  flow requires bandwidth reservation of  $r_i \leq r_j$ , this increase is sufficient for accommodating the  $i^{th}$  flow using its path  $SPI(i)$ .



PRIOR ART

Figure 2

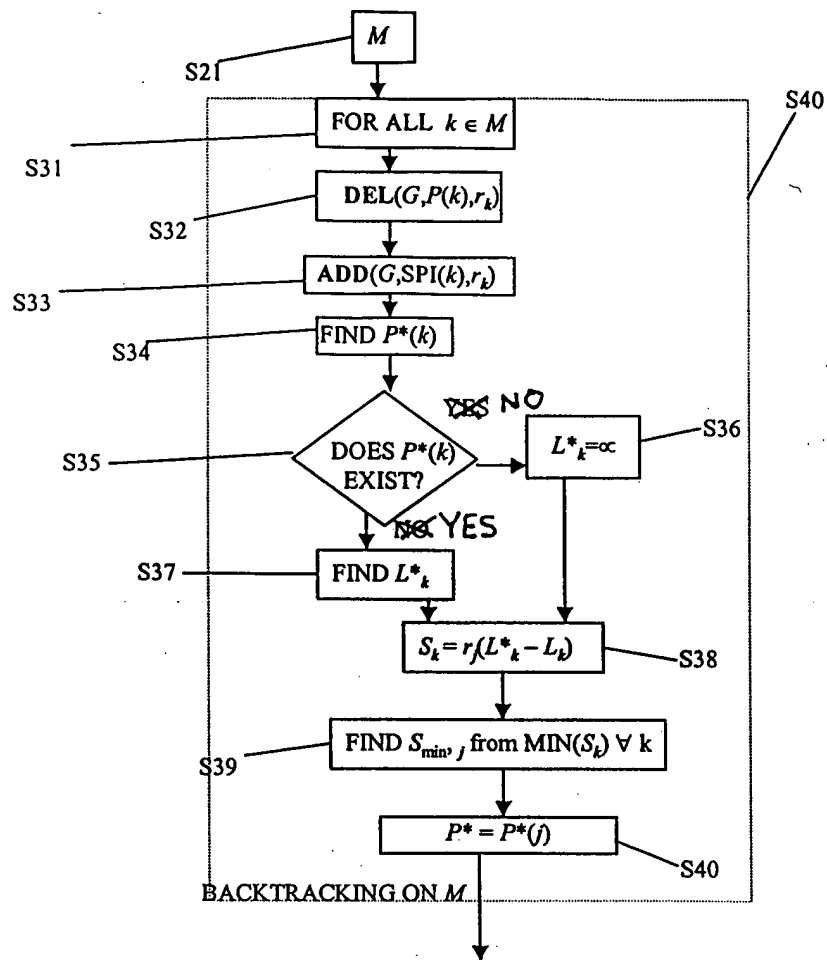


Figure 6